

MEETING MINUTES (FINAL)

CITY OF TUCSON HABITAT CONSERVATION PLANS

Technical Advisory Committee (TAC)

Wednesday, November 19, 2008, 1:00 – 4:00 p.m.

U.S. Fish & Wildlife Service, Tucson Field Office

201 North Bonita Ave, Suite 141

Tucson, AZ 85745

ATTENDEES

City of Tucson (COT) Habitat Conservation Plans (HCPs) Technical Advisory Committee (TAC) members present:

Dennis Abbate (Arizona Game and Fish Department – Research Branch)

Marit Alanen (United States Fish and Wildlife Service)

Rich Glinski (Arizona Game and Fish Department – *retired*)

Ries Lindley (City of Tucson – Tucson Water Department)

Guy McPherson (University of Arizona – School of Natural Resources)

E. Linwood Smith (EPG, Inc.)

Other Attendees Present:

Jamie Brown (City of Tucson – Office of Conservation and Sustainable Development)

Matt Clark (Defenders of Wildlife)

Cat Crawford (U.S. Fish & Wildlife Service)

Mike Cross (Westland Resources)

Locana de Souza (Arizona Game and Fish Department)

Aaron Flesch (University of Montana, *via teleconference*)

David Jacobs (Arizona Attorney General's Office / Arizona State Land Department)

Leslie Liberti (City of Tucson – Office of Conservation and Sustainable Development)

David Taylor (Tierra Right of Way / Arizona State Land Department)

Nicole Urban-Lopez (City of Tucson – Office of Conservation and Sustainable Development)

1. Welcome, introductions, and TAC Guiding Principles

Jamie noted that non-Technical Advisory Committee (TAC) members present could contribute to the conversation by raising their hands or by speaking during the Call to the Audience period of the meeting.

2. Review of 9/17/08 TAC meeting minutes

Jamie received a request to table the review and approval of the 9/17/08 TAC meeting minutes until the next meeting so that TAC members could have additional time for review.

3. Updates:

Town of Marana and City of Tucson possible mitigation cooperation

Jamie reported that personnel from the City of Tucson (COT) and the Town of Marana (Marana) met to discuss mitigation cooperation between the two jurisdictions for their respective Habitat Conservation Plans (HCPs). In terms of a cooperative effort, the COT owns and manages about 20,000 acres as part of the Avra Valley HCP planning area and Marana needs additional land for HCP mitigation. Mitigation for three species – Tucson shovel-nosed snake (restoration potential lands only), burrowing owl, and ground snake – could occur cooperatively in the northernmost Avra Valley properties, including Simpson farm, Hurst farm, and the Santa Cruz farm. The COT would provide the land and Marana would provide the management and monitoring. However, details, such as mitigation credit allocation, still need further discussion, which will be addressed as part of a December 9 field trip and brief workshop.

Leslie said that the goals of the December 9 field trip and workshop are to discuss details such as how much credit should be given for specific activities and what the most appropriate indicators are for the species. The group will look at the land and discuss elements of a successful conservation program and what we will need to do to have synergy between all of the different species. This is because we are trying to accommodate all of the cooperative species mitigation on the same piece of property. We can then determine how much mitigation credit each element will be worth, such as how much is the land worth compared with management and monitoring, as well as which entity will be responsible for how much of each component. Leslie noted that it is not as simple as the COT providing the land and Marana conducting the management and monitoring because there are a lot of related activities Tucson Water staff currently do in the area, so we need to spend some time allocating the responsibilities.

Dennis asked whether Pima County was going to participate in this process. Leslie said that this effort was initiated by Marana and the two jurisdictions need to determine how mitigation cooperation would work before discussing it with Pima County. For example, Leslie added that some of the property may be considered for a conservation park. Thus, additional restoration of the riparian areas may be considered along with how to engage the community and create an education center.

Rich asked if Pima County has any needs that can be met in Avra Valley. Leslie said that she didn't know of any, but Pima County may want to site a Burrowing Owl Management Area (BOMA) in the area and there is potential for all three jurisdictions to do so on COT lands.

Segment 3 Intergovernmental Agreement status

Jamie reported that the Arizona Game and Fish Commission, the Arizona Attorney General's Office, and others from the State of Arizona have signed and approved the Segment 3 Intergovernmental Agreement (IGA). On November 25, The COT Mayor and Council will vote whether or not to approve the IGA. Once approved by the COT Mayor and Council and filed with the Arizona Secretary of State, the COT can begin working on Segment 3 HCP tasks.

New City of Tucson HCP web pages:

Jamie reported that the COT's Office of Conservation and Sustainable Development (OCSO) has a new website, including pages for HCP materials. All of the past agendas, approved minutes and other documents are available on this website, which is: <http://www.tucsonaz.gov/ocsd/HCP.php>

Jamie also mentioned that COT staff established OCSO server space that can be accessed via File Transfer Protocol. This will allow large files to be shared between the TAC and OCSO staff without the need to burn the data onto a compact disc. When a document is posted for review, Jamie will provide the site address and password for the TAC to access the materials.

Mayor and Council adoption of the Conservation Lands System (CLS)

Leslie reported that the COT Mayor and Council recently adopted a new policy stating that all future annexations will comply with Pima County's Conservation Lands System (CLS). She said that COT staff are not sure yet how that will be administered because there were no other details included in the ordinance.

4. Discussion:

Surveys and studies: Cactus ferruginous pygmy-owl

Jamie reminded the TAC that Aaron Flesch submitted a proposal to the TAC several months ago regarding a cactus ferruginous pygmy-owl (CFPO) research study. Matt Clark from Defenders of Wildlife presented information about the study during the August 20, 2008 TAC meeting. Aaron asked to join today's TAC meeting via teleconference to answer questions about his research study.

Aaron reviewed the objectives of the study and spoke to some of the concerns that TAC members previously mentioned. Jamie commented that Aaron's research is important but, at this time, it did not appear to be applicable to the COT's HCP effort because CFPO habitat restoration is not currently proposed. In addition, Jamie said that USFWS staff already delineated CFPO habitat in both COT HCP Planning Areas. Moreover, given the limited funding available for HCP research, the TAC has identified other research funding priorities.

Rich said that he didn't think the research will inform the HCP process, but would like to discuss the research with Aaron separately.

Surveys and studies: Desert tortoise

Jamie recounted prior TAC discussions regarding the TAC's decision to "ground-truth" Pima County's desert tortoise habitat model for lands within the Greater Southlands HCP planning area. He provided a written summary of these discussions. Jamie also reminded the TAC of some of the questions raised after the contractor proposals were received, such as clarification about

why the TAC was requesting validation of Pima County's model and what they are trying to achieve. Given that the least expensive proposal was about \$37,000, funding will be a challenge.

Dennis said that he didn't think the TAC will lose any information by not conducting the surveys this fall. He said that he thought that enough information could be obtained next season if the surveys are conducted properly. The only loss will be the funds available from Segment 2, which Jamie said closes on December 30, 2008. Leslie said that one of the complications is that historically the USFWS hasn't enforced the timeframes for spending the grant money but now the USFWS is starting to enforce them. The surveys were going to be initiated early next year but now that the deadline has been moved up, the COT won't be able to pay for them from the Segment 2 grant.

With regard to the cost of the proposals exceeding the \$25,000 budgeted allocation for Segment 3 survey work, Leslie said that the grant funds are budgeted for different tasks and, per the IGA, a small percentage of funds can be shifted. However, larger shifts may jeopardize completion of the Avra Valley HCP Environmental Assessment as well as require an amendment to the IGA. Leslie said that an amendment will take months to complete so TAC members should decide as soon as possible if they are going to need more money for this project. Specifically, Leslie said it will take about one month to get the contracting in place and about 3 months to revise the IGA. Dennis suggested having the consultants identify work phases so they could get started without the risk of doing more work than the COT has funding for. Leslie said that if the TAC can make a decision soon, the COT should be able to make necessary arrangements within 6 months.

Dennis said that it seems like the consultants are asking for a large sum of money for the amount of work proposed. He suggested that the TAC obtain additional, specific information from the consultants. *[Action Item: OCSD staff will request that the environmental consultants that submitted desert tortoise survey proposals provide answers to TAC questions about the proposed methods]*. Dennis mentioned the \$25,000 is intended for all survey efforts, not just the desert tortoise. Leslie said that lesser long-nosed bat movement study funds were deducted from the grant before the \$25,000 was allocated for surveys, since AGFD is conducting the surveys.

Leslie asked when the most appropriate season or "window" is for desert tortoise surveys. Dennis said that the primary survey window starts during the monsoon season, but they can still find sign and other evidence of desert tortoise presence at other times. He also noted that using detection of sign is more important for determining presence than habitat elements. Rich said that if we have a good winter for the desert tortoise, then April or May might not be bad for sign. Dennis agreed.

Marit said that the group should also think about long term possibilities, such as whether there is potential for desert tortoises to expand into other parts of the HCP Planning Area. She added that the TAC shouldn't cut off what could be habitat just because tortoises are not currently detected there. Rich agreed and said that there are three levels of analysis that the consultants should consider. The first is whether or not an area has any desert tortoise sign. The second level would record locations where desert tortoises should be, but sign is not currently observed. The third level would record areas without sign where one would not expect to ever observe desert

tortoises. This will help identify areas that may be good habitat even if sign or desert tortoises are not observed.

Matt said that he had concerns about using the wrong indicators to determine habitat. He added that we don't know the history of occupancy in different areas and what factors are influencing whether or not those areas are occupied. He said that verifying the desert tortoise habitat model in terms of habitat characteristics as well as presence or absence will give the TAC more valuable information. Rich and Linwood agreed with Matt's comments.

Leslie suggested that the COT invite RECON and SWCA staff members to the next TAC meeting for individual discussions with the committee so that TAC members could obtain more information about their proposals. Rich said that he would invite Cecil Schwalbe to the meeting so that he could assist the TAC members in a discussion about the survey effort before bringing the consultants into the meeting room. Jamie said that he would also invite Erin Zylstra, given her recent work on desert tortoise survey methods. The goal is for the TAC to make a final decision at the January meeting with an accurate cost estimate. Then, the IGA amendment process could be initiated, if necessary. *[Action Item: OCSO staff will invite RECON and SWCA staff to the December TAC meeting to help answer questions regarding their proposals]**[Action Item: Rich invite Cecil Schwalbe to the December TAC meeting for the desert tortoise survey discussion].*

Avra Valley HCP ecological monitoring

Jamie thanked the TAC members who reviewed the Avra Valley Preliminary Draft HCP (May '08) and provided comments to the COT. OCSO staff is compiling the comments, but one of the consistently mentioned comments was that more detail about the ecological effectiveness monitoring program was necessary.

With regard to ecological monitoring, Jamie distributed a spreadsheet he created to help inform the conversation. For each species in the HCP Planning Area, the spreadsheet included the type of habitat, the established biological goals and objectives, and preliminary thoughts on possible indicators, parameters to measure, and benchmarks to signal a change in management. In the notes column of the spreadsheet, Jamie mentioned possible factors that might confound measurements. For example, urbanization interspersed between and around the planning area would likely lead to increased direct mortality due to the presence of additional vehicles and domesticated pets. For the burrowing owl, activities outside the BOMAs will likely affect the number and behavior of burrowing owls observed within the BOMAs. Presently, burrowing owls are translocated from Phoenix to the Tucson area. However, if the translocated effort ceases we might observe a decreasing trend in the number of burrowing owls using the COT's BOMAs even though this trend may have little to do with BOMA configuration or management. For these reasons, species-specific monitoring may pose challenges for many species.

Leslie asked TAC members if they would like to see additional information gathered for inclusion in the table. Rich wondered if a flexibility indicator could be included for the requirements. For example, vegetation requirements could be based on cover, in which case a

golf course may meet the requirement, or it could be based on structure, in which case strict hydriprarian cover would be required.

Leslie suggested that each TAC member take responsibility for one species on the spreadsheet to review and discuss at the next meeting. TAC members volunteered, or were volunteered, to more closely examine the following: Tucson shovel-nosed snake (Marit and Trevor), ground snake (Trevor and Rich), lesser long-nosed bat (Guy and Dennis), pale Townsend's big-eared bat (Linwood), cactus ferruginous pygmy-owl (Dennis and Rich), burrowing owl (Rich and Marit), and Western yellow-billed (Linwood). Guy will also further consider invasive grass monitoring. *[Action Item: TAC members consider ecological effectiveness monitoring for the Avra Valley species of concern and bring thoughts to the next TAC meeting.]* Marit noted that one of the threats and important stressors for the lesser long-nosed bat may be light pollution.

Matt commented that it is important to define what one means by "connectivity" for the different species. For example, he asked "Does connectivity constitute contiguous habitat or does it constitute a certain number of patches of habitat?" Leslie agreed and said that the TAC is going to have to determine what constitutes connectivity for each species. Rich said that connectivity is more important for animals that move on the ground and less important for species that fly.

Pima pineapple cactus conservation: Follow-up from September TAC discussion

Jamie distributed a document that included a summary of PPC conservation factors discussed at the September 17, 2008 TAC meeting, his observations from USFWS biological opinions concerning PPC, and possible PPC conservation scenarios that Leslie drafted.

The group reviewed the PPC conservation factors discussed at the September 17, 2008 TAC meeting. With regard to the point that C. McDonald's master's thesis provides the best available science on maximum pollination distance by *Diadasia* ground-nesting bees, Marit added that the thesis states that that distance is about 1 kilometer. Mike asked if distances were measured further than 1 kilometer. Guy said that he is 90 percent certain that he did, but will double-check that. *[After the meeting, Guy added that C. McDonald's study site was 1.2 kilometers in length, and so he observed pollen moving greater than 1 kilometer. However, very little pollen was transported greater than 600 meters.]*

With regard to the point that on-site mitigation within private yards would not count toward mitigation requirements given the lack of enforcement capacity, Mike said that he believed that may be an error. He said that he had worked on approved biological assessments that included conservation measures where enforcement capacity would be written into Covenants, Conditions and Requirements as well as deed restrictions. Rich said that he thinks this enforcement capacity is pretty weak as Homeowner's Association commitment to enforcement can vary greatly.

In section two of the handout, Jamie included some of his personal observations of USFWS biological opinions involving PPC, which he read to the TAC. He noted that USFWS staff had not reviewed his observations. He said that it appears that the USFWS biological opinions may disagree with the applicant's biological assessment in terms of the number of acres of PPC habitat or what is considered an adequate conservation measure. Yet, given the relatively small

size of the proposed impact in relation to the estimated amount of known habitat in the species' range, no jeopardy opinion is issued and the project is allowed to proceed.

Jamie said that the point of describing observations from USFWS biological opinions is to balance USFWS recommendations and positions with the PPC conservation factors discussed recently by TAC members. Without considering what the USFWS considers as conservation or what constitutes habitat elements, the TAC and COT risk creating a conservation program that may not be supported by USFWS staff. He added that it would be important for the COT to state assumptions and gather USFWS input as it proceeds in drafting a PPC conservation program.

Leslie began discussion of section 3 in the handout, entitled "Possible Conservation Scenarios." Based on prior TAC discussion, she drafted some possible goals for a PPC conservation program. With regard to the goal, "Recognizes regional or range-wide priorities and opportunities," she said that HCP development involves considering trade-offs and that areas of regional or range-wide conservation importance should be a priority. Other possible goals, included:

- *Creates a system of protected habitat in areas of greater regional significance that is designed to support all ecological needs of the species.*
- *Provides incentives for the protection of higher quality habitat and/or locations of higher PPC densities.*

With regard to the goal, "Provides incentives for higher intensity development in areas of lower regional significance in order to reduce the overall footprint of development and reduce development pressures within habitat of greater regional significance," Leslie said that this recognizes the Greater Southlands as a future growth area, not only by the COT, but also by Pima County. And, it is recognized as a higher growth opportunity area because attention has shifted away from other areas, such as the Tortolita Fan.

With regard to the goal, "Makes best use of existing City environmental regulations," Leslie said that this does not mean that these regulations should necessarily be used in their current form, but recognizes that these are already adopted tools. Given issues such as the Private Property Rights Protection Act ("Proposition 207"), it will be much easier to use what already exists. Concerning the goal, "Provides benefits for species and for development that result from regional and systematic conservation (as opposed to relying on individual Section 7 consultations)," Leslie said that she is a firm believer in the potential for "win-win" scenarios. She said that much can be accomplished for the PPC by addressing conservation at a regional scale while allowing effective and efficient development. With regard to the goal, "Creates a mechanism for funding of research and management activities," Leslie said that this recognizes the need to think long-term and not just about what is currently on-the-ground. Leslie asked for any TAC feedback on these goals. Marit said that they sound noble.

In terms of possible PPC conservation scenarios, Leslie said that the HCP Planning Area was divided into lands within Pima County's Conservation Lands System (CLS) and lands outside the CLS. With the COT Mayor and Council's recent adoption of a policy stating that the CLS will be adopted with all new COT annexations, this sets the bar for those lands. For Scenario 1,

which includes lands within the CLS, there are two options. For Option A, compliance with the CLS, Native Plant Preservation Ordinance (NPPO), and watercourse preservation regulations would be required with the implication that NPPO compliance would be met with the 30% set-aside option. Leslie said that there should also be recognition for some type of management, which is typically done through the Homeowner's Association. She said that there are some basic considerations in the current CLS guidelines that address set-aside configuration, such as contiguity of habitat. Corridors are also mentioned, but they are not specific to pollinators or seed dispersers, for example.

Option B requires compliance with the NPPO and watercourse preservation regulations, but allows reduced compliance with the CLS set-aside percentage requirement in exchange for a higher standard of the set-aside configuration, specific to PPC conservation. It would also require a higher standard for management. This is appropriate where the COT could achieve more PPC conservation benefit from a property if there is more flexibility.

Leslie said that Scenario 2 is more complicated and likely, more controversial. But, like Scenario 1, it serves as a starting point for discussion. She said that the four options attempt to recognize the necessary trade-offs within the HCP Planning Area. With Option A, compliance with the NPPO and the watercourse preservation regulations would be required, with NPPO compliance being met with the 30% set-aside methodology. She said that perhaps there are areas that, by policy or regulation, the COT concludes that a property provides a buffer to the CLS or is located in a particular sensitive area and so 30% set-aside would be required. Basic set-aside considerations would include contiguity of corridors and a management mechanism.

Leslie said that Option B is similar to Option A, except that some areas, such as the lands between Interstate 10 and Interstate 19 where habitat is of lower quality, are more appropriate for NPPO compliance through assessed value of PPC plants impacted. She said that this would require some revision to the ordinance. This would allow development to be focused there and use the generated funds to accomplish PPC conservation goals such as funding research to both improve understanding of the species and refine the guidelines used to determine how set-asides are configured. In addition, the funds could also be used for habitat acquisition or management activities on lands already protected.

With Option C, Leslie said that NPPO compliance would be met with preservation-in-place and transplanting on-site of PPC. This is currently allowed with the NPPO, however, where PPC are involved, the focus could be on transplanting in a controlled manner to generate additional information to inform other aspects of PPC conservation program. For Option D, if off-site mitigation banks are available, participation in that mitigation bank would be accompanied by flexibility in the NPPO and watercourse preservation regulations. This option would be best most appropriate for those lands best suited for high-intensity use in exchange for contributing to off-site mitigation.

Linwood asked if the implementation of any of the scenarios was dependent on presence of PPC or presence of PPC habitat. Leslie said that still needed to be discussed. She said that Marc Baker's survey effort indicated that some areas have higher PPC densities than others, which could be one consideration. However, Leslie said that from what we have read and heard from

USFWS staff, just because PPC do not occur in an area does not mean it is not PPC habitat. What constitutes an acceptable place to trade-off increased development for benefits elsewhere needs to be determined. Leslie said that perhaps this is something that is done spatially, where zones are established with Option A, B, C here, and B and C there, for example.

Rich said that fine-grained detail in the zones would be important given all of the variability of the landscape. Dennis said that he likes the idea of flexibility, given the varying conditions across the planning area. Leslie said that the flexibility is important because there are many things that could occur in the area that would be difficult to anticipate, such as the stormwater management as part of Pima County's Lee Moore Basin Management Study, which may not protect all washes. The proposed locations of future major arterial streets and intersections are another consideration, as these areas are best suited for high-density development.

Leslie said that the COT is engaged in the HCP process because staff and officials think it is the right thing to do – to address the impacts of potential development. However, she said that it is important to remember that flexibility with the lands outside the CLS is necessary. She said that Pima County would not have designated those lands as “Outside of the CLS” if there wasn't recognition that they have lower biological value and are considered a future growth area. She said that there needs to be balance in how we approach the conservation program. Leslie said that the USFWS operates under constraints that require it to be conservative, which is realistic and reasonable. Yet, while one-to-one habitat mitigation is recommended by USFWS, some private projects conserve far less.

With the implementation of just the CLS in areas denoted as PPC Priority Conservation Areas (PCAs) by Pima County, Leslie said that that would achieve about a 35% minimum protection of PPC PCA in the planning area. And, the PCA includes lands that may not be actual PPC habitat. She added that if all other development were required to set-aside 30% as part of the NPPO – which she said she doesn't think is appropriate – just under 50% of PCA within the HCP planning area would be protected. She said that this illustrates that there is an opportunity to balance the trade-offs while doing something beneficial for the long-term conservation of PPC.

Marit said that, ultimately, the USFWS would need to weigh the conservation program for jeopardy. So, she said that it will also be important to describe what uses (e.g., golf course), if any, will be allowed in the set-aside as well as the legal protections (e.g., CC&Rs, conservation easements) placed on the set-aside. Although a certain percentage may be described as “set-aside,” what that set-aside looks like and how it contributes to species conservation are critical questions the USFWS will need to consider. Marit added that she is not completely comfortable with Option C under Scenario 2.

Leslie said COT staff will provide additional material for discussion at the January TAC meeting. *[Action Item: OCS staff prepare materials (i.e., maps and tables) to inform the discussion of PPC at the January TAC meeting].* In the meantime, she asked that TAC members review and consider the scenarios. Leslie asked Marit if she would ask Mima Falk (USFWS) to review the “Scenarios” section and provide feedback between now and the January TAC meeting. *[Action Item: Marit ask Mima Falk (USFWS) to review the “Scenarios” section of the PPC handout and provide feedback by the January TAC meeting.]*

Jamie said that he skimmed Resource Planning Advisory Committee (RPAC) comments on the Preliminary Draft of the Greater Southlands HCP and noted that there were questions as to the benefits of coverage under a Section 10 permit on land where there is currently no federal nexus. Also, there were questions about whether or not a landowner could be covered under an individual Section 7 permit rather than the COT's Greater Southlands HCP.

Jamie added that the question of jeopardy may need further consideration, wondering if the large size of the HCP planning area may be more likely to result in a jeopardy opinion. Guy wondered if Jamie was suggesting that there is a different standard for individual section 7 processes versus HCP section 10 processes. Jamie added that how jeopardy is applied at different scales may be an important consideration. Some of the biological opinions he has read state something to the effect of "This project will affect X amount of acres and based on what the USFWS knows about PPC habitat based on prior biological opinions, the project will have less than Y percent impact on the known habitat of PPC." Jamie wondered if the USFWS performs calculations after each development is approved to determine at what point the cumulative impacts will lead to a jeopardy opinion.

Leslie said that Jamie's point is legitimate because when one is talking about the scale of 50 or 100 acres, that is one thing, but when one is talking about the scale of 130,000 acres, such as with the Greater Southlands HCP planning area, that is entirely different consideration. So, the question of what constitutes jeopardy when considering such a large area, is an important one. *[Action Item: OCS staff gather more information (e.g., how cumulative impacts are calculated, what the jeopardy threshold is) on how jeopardy opinions are reached by USFWS for developments impacting PPC habitat].* And, we do not have any specific guidance because there is not another HCP in place with which to compare. Rich said that, intuitively, large-scale conservation planning is clearly better for the species than a project-by-project approach. Whether or not lenience or flexibility is granted by the USFWS is a good question. Marit said that she would think that lenience or flexibility would be granted for large-scale conservation planning, but could not say definitively.

5. Upcoming meetings

The December TAC meeting will involve continuing discussion about the desert tortoise survey and Avra Valley ecological effectiveness monitoring. In January, the two topics may be carried forward along with a continued conversation about Pima pineapple cactus conservation. Jamie mentioned that it might be helpful to consider any data (e.g., depth to groundwater) collected by Tucson Water staff that might inform, or be included in, ecological effectiveness monitoring for the HCP.

6. Call to the Audience

With regard to the PPC handout under section 2, the second bullet which states: "A one-to-one mitigation ratio appears to be the recommendation although applicants (e.g., Diablo Village)

often conserve much less,” Mike said that he was involved in that project and Bob Schmalzel (Westland Resources, Inc.) delineated 62 acres of PPC habitat. And, that was the amount of acreage set-aside or conserved in a conservation bank. Therefore, the one-to-one mitigation ratio was met. However, Mike said that the USFWS disagreed with the delineation but offered no technical response. Therefore, according to the applicant, the applicant believed that he/she provided one-to-one mitigation. Leslie noted that according to the USFWS, it was not one-to-one mitigation, but appreciated the clarification.

With regard to creating zones for different PPC conservation options, Matt said that a lot of factors can go into how one might define different zones. Therefore, ultimately, one might want to consider developing a matrix of factors, and add geospatial layers of the factors to create a sum of habitat value. This would help define the options and provide a justification so that landowners on either side of the zone boundary understand what defined it and that it was science-driven and not arbitrary. Rich said that he agreed with that suggestion and Matt’s rationale. He added that management and monitoring has to continually inform that delineation and might have to change it drastically.

Leslie said that creating zones and creating a GIS-based index are not mutually exclusive. She said that, basically, the CLS is composed of zones based on a GIS model. However, if the PPC conservation zones are created solely from the raw output of GIS, raster-based model, it could yield small patches that qualify for certain options surrounded by areas that qualify for different options. So, considering the bigger picture is also important, which is why she used the word “zones.”

7. Adjournment

The meeting was adjourned at 3:25 p.m.

Summary of Action Items:

- OCSD staff will request that the environmental consultants that submitted desert tortoise survey proposals provide answers to TAC questions about the proposed methods;
- OCSD staff will invite RECON and SWCA staff to the December TAC meeting to help answer questions regarding their proposals][Action Item: Rich invite Cecil Schwalbe to the December TAC meeting for the desert tortoise survey discussion;
- TAC members consider ecological effectiveness monitoring for the Avra Valley species of concern and bring thoughts to the next TAC meeting;
- OCSD staff prepare materials (i.e., maps and tables) to inform the discussion of PPC at the January TAC meeting;
- Marit ask Mima Falk (USFWS) to review the “Scenarios” section of the PPC handout and provide feedback by the January TAC meeting, and;
- OCSD staff gather more information (e.g., how cumulative impacts are calculated, what the jeopardy threshold is) on how jeopardy opinions are reached by USFWS for developments impacting PPC habitat.